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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/865,484 | 05/29/2001 | Johannes Steffens | 4100-0126P | 3500 |
| 2292 | 7590 | 06/28/2005 | EXAMINER | |
| BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747 | | | WARE, CICELY Q | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2634 | |
| DATE MAILED: 06/28/2005 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/865,484

Applicant(s)

STEFFENS ET AL.

Examiner

Cicely Ware

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-3 and 8-9 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2. Claim 3 is objected to because of the following informalities:
 - a. Claim 3, line 4, applicant uses the phrase "demodulation in the second signal". Examiner suggests using "demodulation and the second signal" for clarification purposes.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Lundqvist et al. (US Patent 5,640,679).

(1) With regard to claim 1, Lundqvist et al. discloses a process for synchronizing an input signal including the following process steps: demodulating the input signal according to a first demodulation method in relation to a first signal parameter for

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creating a first demodulated input signal; and correlating the first demodulated input signal with a first comparison signal that depends upon the first demodulation method to determine a time offset between the first demodulated input signal and the first comparison signal; and time-wise shifting the input signal in accordance with the time-wise offset determined by the correlation (col. 4, lines 66-67, col. 5, lines 1-15, 19-29).

Allowable Subject Matter

5. Claims 2-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: The instant application discloses a process for synchronizing an input signal. Prior art references show similar methods but fail to teach: **“demodulating the input signal (S) according to a second demodulation method in relation to a second signal parameter for creating a second demodulated input signal and correlating the second demodulated input signal with a second comparison signal that depends upon the second demodulation method for determining a time offset between the second demodulated input signal and the second comparison signal”, as in claim 2; “wherein the first demodulation method is amplitude demodulation (AM) and the first signal parameter is the amplitude and the second demodulation method is frequency demodulation (FM) and the second signal parameter is frequency”, as in claim 3; “the input signal (S) is demodulated according to n different demodulating**

methods in relation to n different demodulated input signals; and each demodulated input signal is correlated with an associated comparison signal dependent on the associated demodulation method to determine a time offset between each demodulated input signal and the associated comparison signal”, as in claim 4; “wherein each demodulation method is defined by subjecting the input signal (S) to one of a definite analytical and partially defined function in order to create the associated demodulated input signal”, as in claim 5; “wherein at least one of the functions is one of: amplitude demodulation; the logarithm of the amplitude demodulation frequency demodulation; and the time differential of the frequency demodulation”, as in claim 6; “wherein the different results of the correlations of the different demodulation methods are subjected to a weighting, with the correlation results of each demodulation method having a predetermined weighting factor applied thereto, for calculating the offset of the input signal (S)”, as in claim 7; “wherein the comparison signal is obtained by subjecting a synchronization sequence to the first demodulation method”, as in claim 8; “wherein the input signal (S) is subjected to an analog/digital conversion at one of before and after demodulation”, as in claim 9; “wherein a filtering takes place at one of before and after the analog/digital conversion”, as in claim 10; “wherein the filtering is different for each demodulation method”, as in claim 11; “wherein the filtering is carried out so that the one demodulation method is converted into another demodulation method”, as in claim 12; “wherein each result of the correlation is subjected to a first interpolation between sampling points”, as in

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claim 13; **"wherein a first interpolation method used in the first interpolation depends upon one of: an associated demodulation method; the comparison signal; and the filtering"**, as in claim 14; **"wherein the time offset of the input signal is subjected to a second interpolation between sampling points"**, as in claim 15.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cicely Ware whose telephone number is 571-272-3047. The examiner can normally be reached on Monday – Friday, 8-5.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Cicely Ware

cqw

June 24, 2005


STEPHEN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER